



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,217	10/26/2001	Michael S. Foster	030048037US	5326
64066	7590	08/01/2006	EXAMINER	
PERKINS COIE, LLP			CHO, HONG SOL	
P.O. BOX 1247			ART UNIT	
PATENT - SEA			PAPER NUMBER	
SEATT;E, WA 98111-1247			2616	

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/066,217	Applicant(s) FOSTER ET AL.	
	Examiner Hong Cho	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-20, 22, 24-32, 34 and 36-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-20, 22, 24-32, 34 and 36-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The following is in response to the amendments filed on 6/26/2006. Claims 10, 21, 23, 33, 35 and 46 have been cancelled. Claims 1-9, 11-20, 22, 24-32, 34 and 36-45 are pending in this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b) that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 6, 7, 9, 11-14, 17, 20, 22, 24, 25, 29, 32, 34, 36-39, 42 and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanabe et al (U.S 5177736), hereinafter referred to as Tanabe.

Re claim 1, Tanabe discloses a switch (figure 1, element 10) having ports (figure 1, elements 100-1 – 100-L) connected to a crosspoint switch (figure 1, element 200) of the switch, the crosspoint switch having inputs and outputs connected to the ports (figure 1, elements 610b-1 – 610b-L). Tanabe discloses the crosspoint switch having an output

connection to a central processor (*having at least one output that is not connected to a port*, figure 1, element 670a). Tanabe discloses assigning identification codes to a call identifier (VCI) (*providing a reserved address*), receiving packets with an address from line interfaces (*receiving data having an address through a source port*, column 4, lines 35-40), identifying packets based on a VCI number (*checking if the address of the received data matches the provided reserved address*) and routing control packets to the central processor (*directing the crosspoint switch to connect the source port to the output that is not connected to a port so that data addressed to the reserved address is routed to the output that is not connected to a port*, column 5, line 66 to column 7, line 3).

Re claims 2, 12, 25 and 37, Tanabe discloses the output of the switch (figure 1, element 300) connected to an external device (figure 1, element 400).

Re claims 6, 14 and 39, Tanabe discloses identifying packets as control packets (*administrative data*) based on a VCI number (column 5, line 66 to column 6, line 3).

Re claims 7, 17, 29 and 42, Tanabe discloses a switch unit (figure 1, element 200) having one more output (figure 1, element 300) than the number of ports of a packet switch (figure 1, element 10).

Re claims 9, 20, 32 and 45, Tanabe discloses receiving packets (*the data is a frame*, figure 3).

Re claims 11 and 22, Tanabe discloses a routing device (figure 1, element 10) having a plurality of ports (figure 1, elements 100-1 –100-L), a switch unit (figure 1, element 200) having inputs and outputs connected to the ports (figure 1, elements 610b-1 – 610b-L) with an output connection to a central processor (*having at least one output*

that is not connected to a port, figure 1, element 670a). Tanabe discloses receiving packets with an address from line interfaces (*receiving communications at a source port*, column 4, lines 35-40), routing control packets to the central processor (*directing the crosspoint switch to connect the source port to the output that is not connected to a port based on an indication that a communication is administrative*, column 5, line 66 to column 7, line 3). Tanabe discloses a call identifier (VCI) for identifying a logical communication path (*data having an virtual address*, column 5, lines 42-44) and identifying packets as control packets (*administrative data*) based on a VCI number (column 5, line 66 to column 6, line 3).

Re claims 13 and 38, Tanabe discloses the output of the switch (figure 1, element 300) connected to an external device associated with a control terminal (figure 1, element 400).

Re claims 24 and 36, Tanabe discloses a control terminal (*a network manager*, figure 1, element 400).

Re claim 34, Tanabe discloses a routing device (figure 1, element 10) having a plurality of ports (*a plurality of routing device ports*, figure 1. elements 100-1 – 100-L), connecting a port of a switch (figure 1, element 6201-m) to another port of a switch unit (*connecting a switch port to another switch port*, figure 1, element 200) having inputs and outputs connected to the ports (*each routing device port being connected to switch port*, figure 1, elements 610b-1 – 610b-L) with an output connection to a central processor (*having at least one output that is not connected to a port*, figure 1, element 670a). Tanabe discloses a line interface transmitting control packets to the switch unit

(configuring the switch to connect a switch port connected to a source routing device port that has received an administrative communication, column 4, lines 57-59) and routing control packets to the central processor (transmitting the administrative communication from the source routing device port to the switch port that is connected to the administrative device, column 5, line 66 to column 7, line 3). Tanabe discloses a call identifier (VCI) for identifying a logical communication path (data having an virtual address, column 5, lines 42-44) and identifying packets as control packets (administrative data) based on a VCI number (column 5, line 66 to column 6, line 3).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
5. Claims 3-5, 8, 15, 16, 18, 19, 26-28, 30, 31, 40, 41, 43, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanabe in view of Heil (US 6944152).

Re claims 3-5 and 26-28, Tanabe discloses all of the limitations of the base claim, but fails to teach that the reserved address identifies that the received data is related to a Fibre Channel and an InfiniBand upper layer protocol. Heil discloses attaching Fibre Channel or an InfiniBand from a switch to a port of a fabric (column 2, lines 23-29). It

would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Tanabe to have Fibre Channel or an InfiniBand installed to a port of a fabric for the benefit of faster data transfer and higher bandwidth utilization.

Re claims 8, 18, 19, 30, 31, 43 and 44, Tanabe discloses all of the limitations of the base claim, but fails to teach that a routing device is Fibre Channel compatible or InfiniBand compatible. Heil discloses attaching Fibre Channel or an InfiniBand from a switch to a port of a fabric (column 2, lines 23-29). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Tanabe to have Fibre Channel or an InfiniBand installed to a port of a fabric for the benefit of faster data transfer and higher bandwidth utilization.

Re claims 15, 16, 40 and 41, Tanabe discloses all of the limitations of the base claim, but fails to teach that the switch port that is not connected to a port is connected to a device that provides a Fibre Channel and an InfiniBand upper layer protocol. Heil discloses attaching Fibre Channel or an InfiniBand from a switch to a port of a fabric (column 2, lines 23-29). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Tanabe to have Fibre Channel or an InfiniBand installed to a port of a fabric for the benefit of faster data transfer and higher bandwidth utilization.

Response to Arguments

6. Applicant's arguments with respect to claims 1-9, 11-20, 22, 24-32, 34 and 36-45 have been considered but they are not persuasive.

On page 13 of Applicant's remarks, the Applicant argues that Tanabe does not disclose that the data address is virtual and a virtual address indicates the communication is administrative. The examiner respectfully disagrees.

On page 17 of the specification, a virtual address is defined as follows: "a virtual address is virtual in the sense that it is not a physical address of a node. Rather a virtual address is mapped to a series of output ports...". For example, when a frame is received with a virtual address of 0, the frame should be routed to a port 2 (specification, paragraph [0044], lines 13-15). Tanabe discloses routing a packet with a call identifier (VCI) number 0 to the central processor (column 5, lines 42-44). The examiner believes Tanabe's call identifier is the claimed "virtual address".

Tanabe further discloses identifying a packet as a control packet based on its VCI number (*a virtual address indicates the communication is administrative*) where the packet is routed to the central processor (column 5, line 66 to column 6, line 3).

Since Tanabe discloses all of the limitations of claims 1, 11, 22 and 34, a *prima facie* cases of anticipation under Section 102 and obviousness under 103 are established.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

Art Unit: 2616

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3088.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hong Cho
Patent Examiner
7/26/2006


HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600